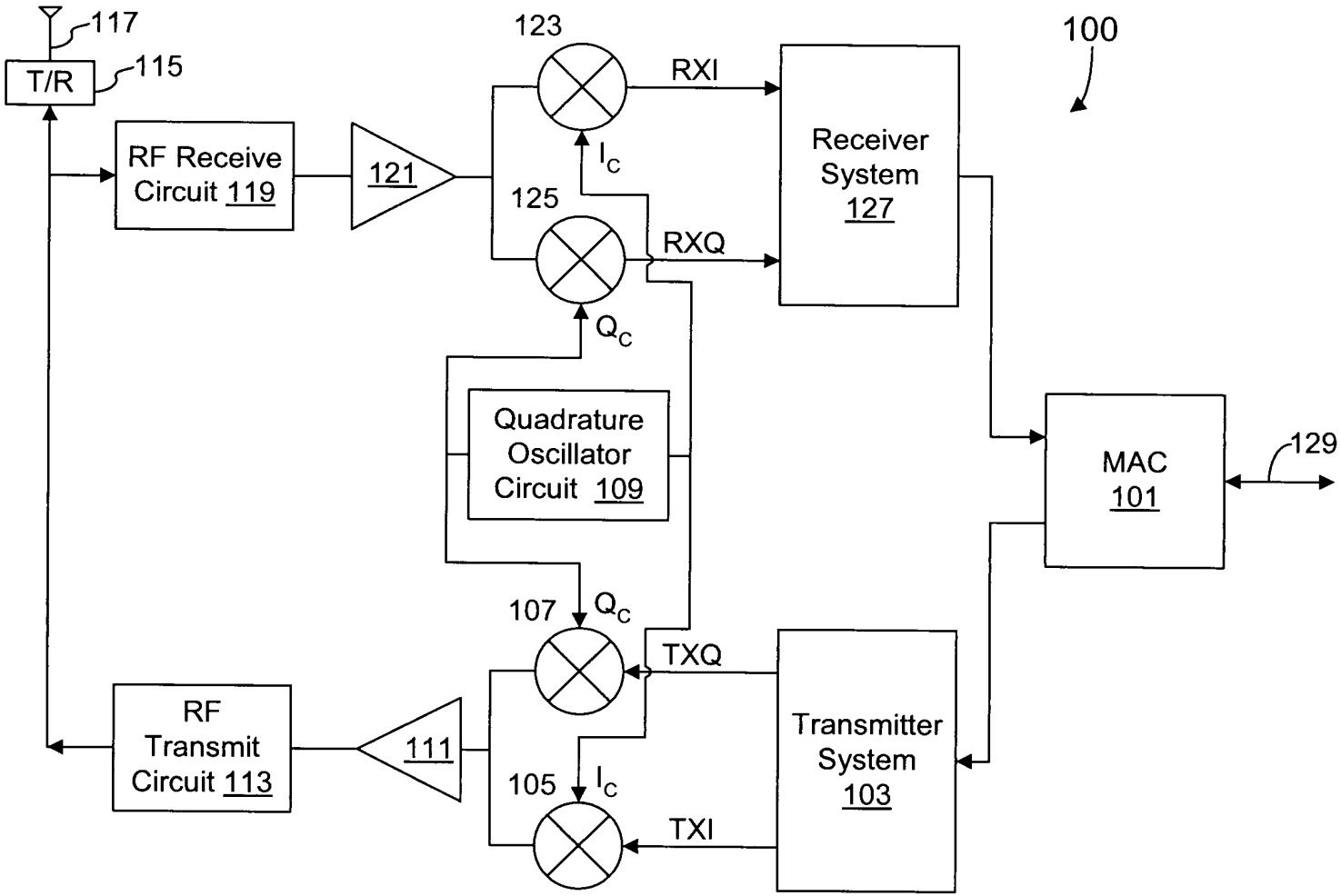
117
T/R
115
RF Receive Circuit 119
121
123
RXI
I_C
125
RXQ
Q_C
Receiver System 127
100
Quadrature Oscillator Circuit 109
MAC 101
129
107
Q_C
TXQ
RF Transmit Circuit 113
111
105
I_C
TXI
Transmitter System 103

FIG. 1

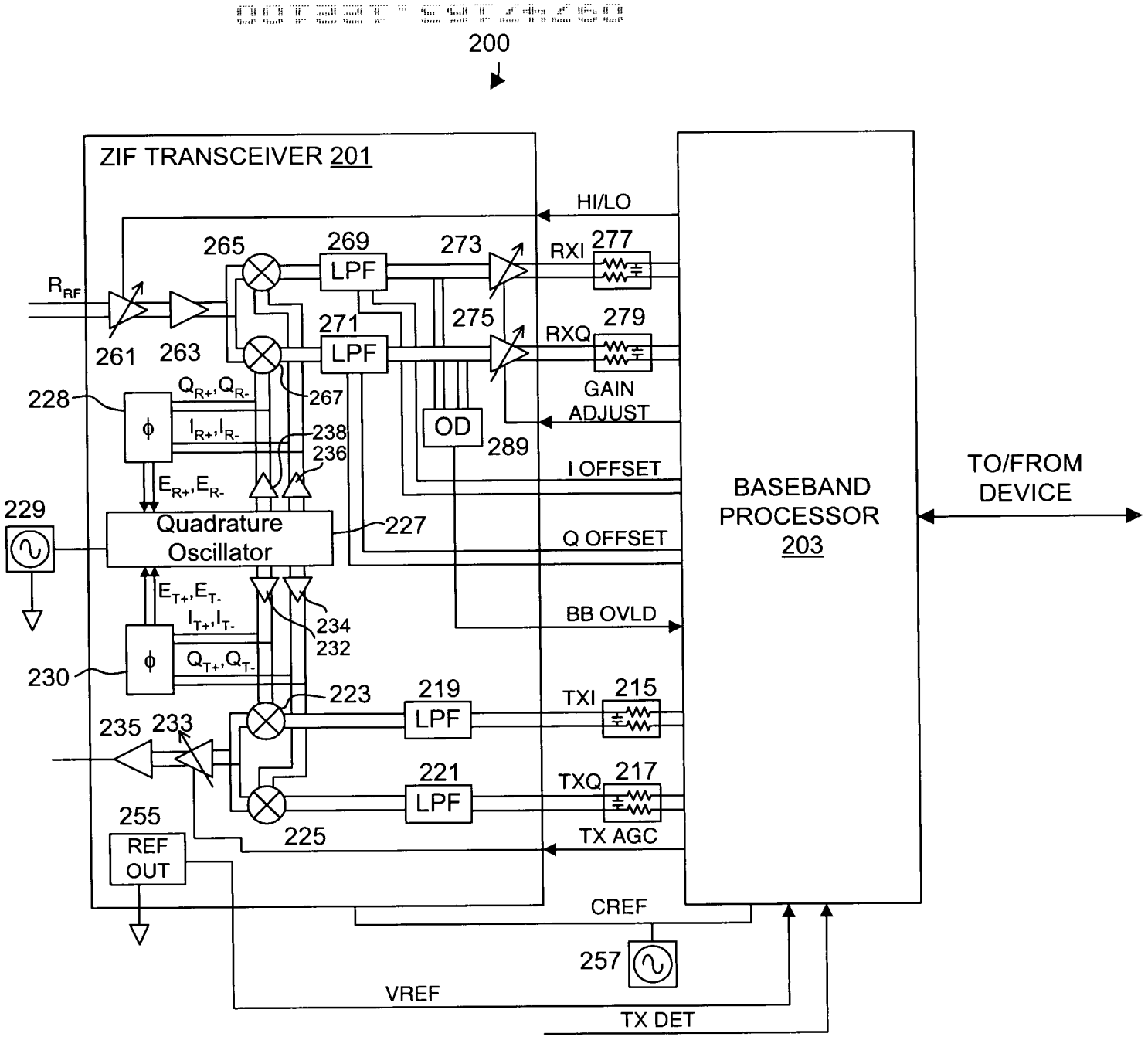
200
ZIF TRANSCEIVER 201
HI/LO
265
269
LPF
273
RXI
277
R_{RF}
271
LPF
275
RXQ
279
261
263
GAIN
ADJUST
228
Q_{R+},Q_{R-}
267
I_{R+},I_{R-}
238
236
OD
289
I OFFSET
E_{R+},E_{R-}
TO/FROM
DEVICE
229
Quadrature
Oscillator
227
Q OFFSET
BASEBAND
PROCESSOR
203
E_{T+},E_{T-}
I_{T+},I_{T-}
234
232
BB OVLD
230
Q_{T+},Q_{T-}
223
219
LPF
TXI
215
235
233
221
LPF
TXQ
217
255
REF
OUT
225
TX AGC
CREF
257
VREF
TX DET

FIG. 2

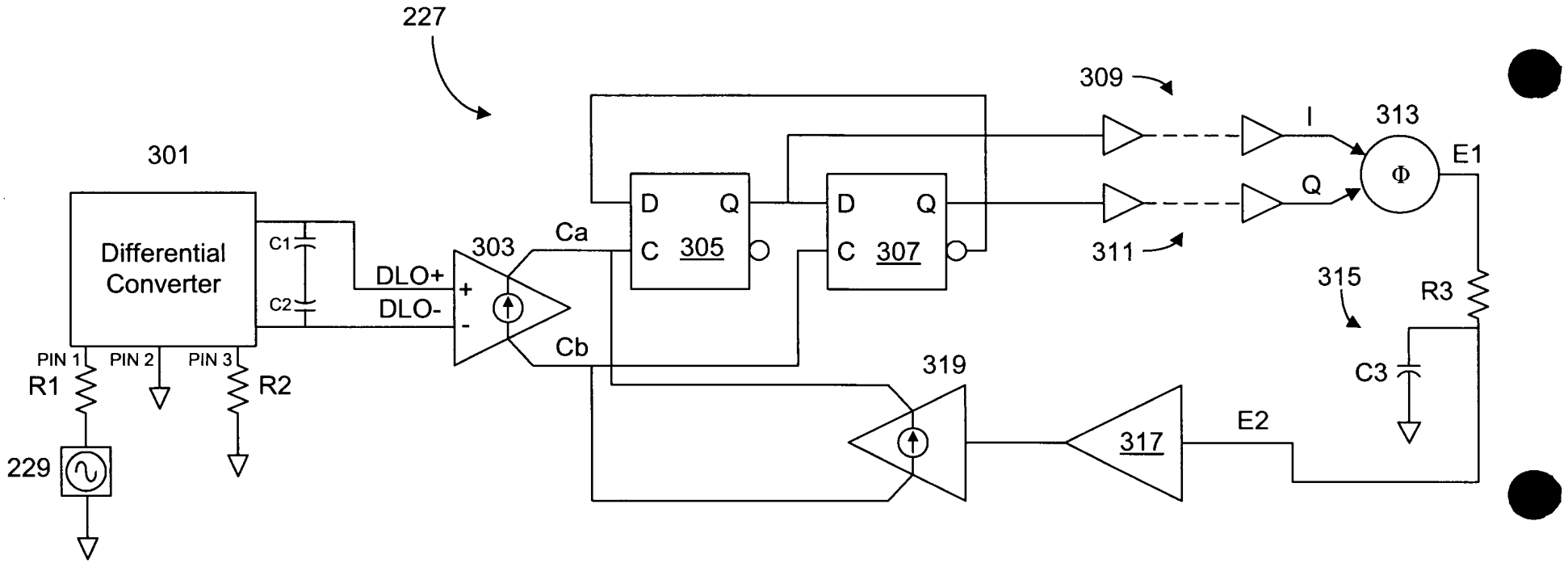
227
309
301
313
I
E1
Q
Differential Converter
C1
C2
DLO+
DLO-
303
Ca
Cb
D
Q
C
305
D
Q
C
307
311
315
R3
C3
PIN 1
PIN 2
PIN 3
R1
R2
229
319
317
E2

FIG. 3

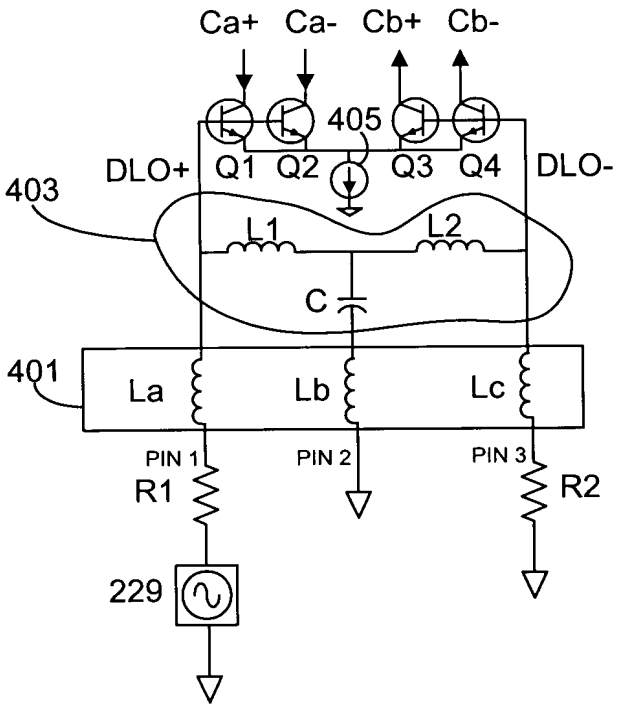
Ca+
Ca-
Cb+
Cb-
405
DLO+
Q1
Q2
Q3
Q4
DLO-
403
L1
L2
C
401
La
Lb
Lc
PIN 1
PIN 2
PIN 3
R1
R2
229

FIG. 4

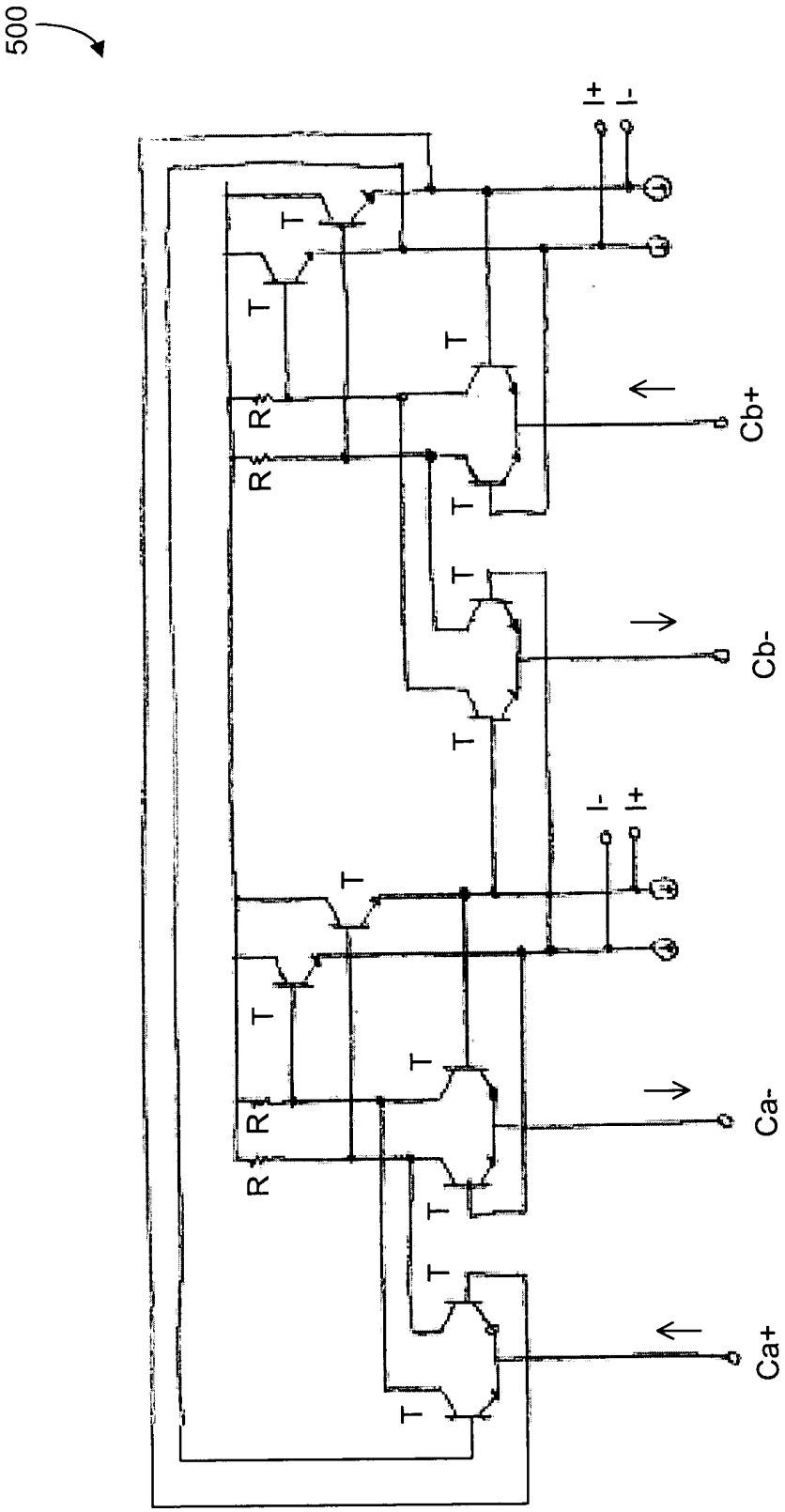

FIG. 5

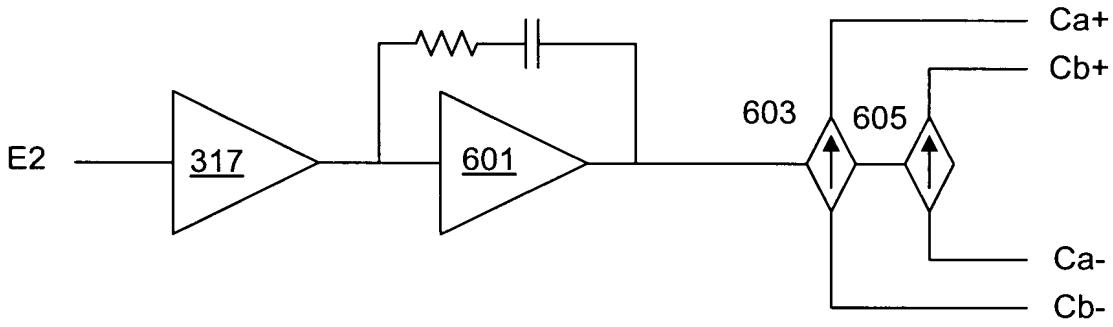

FIG. 6

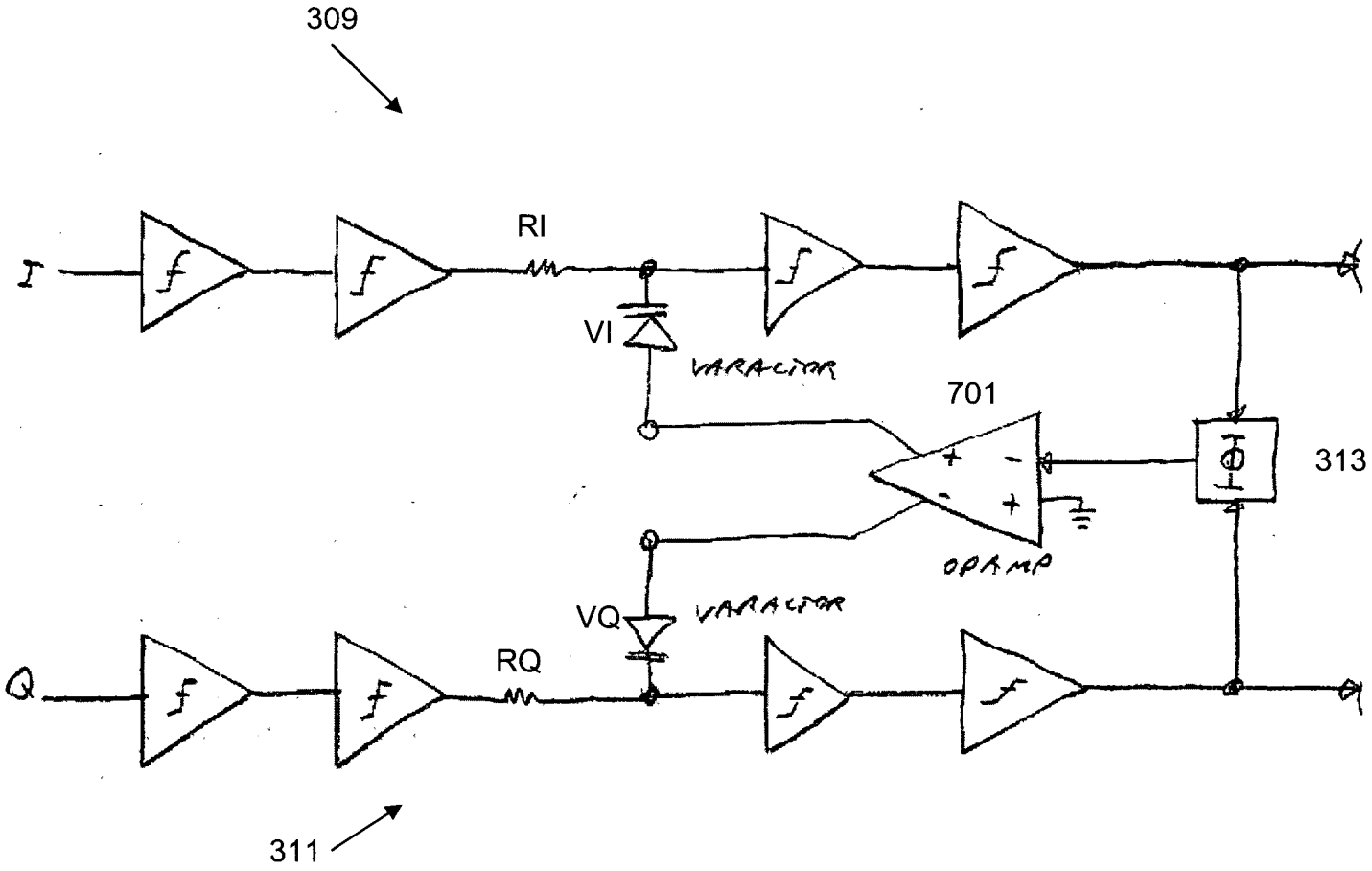

FIG. 7

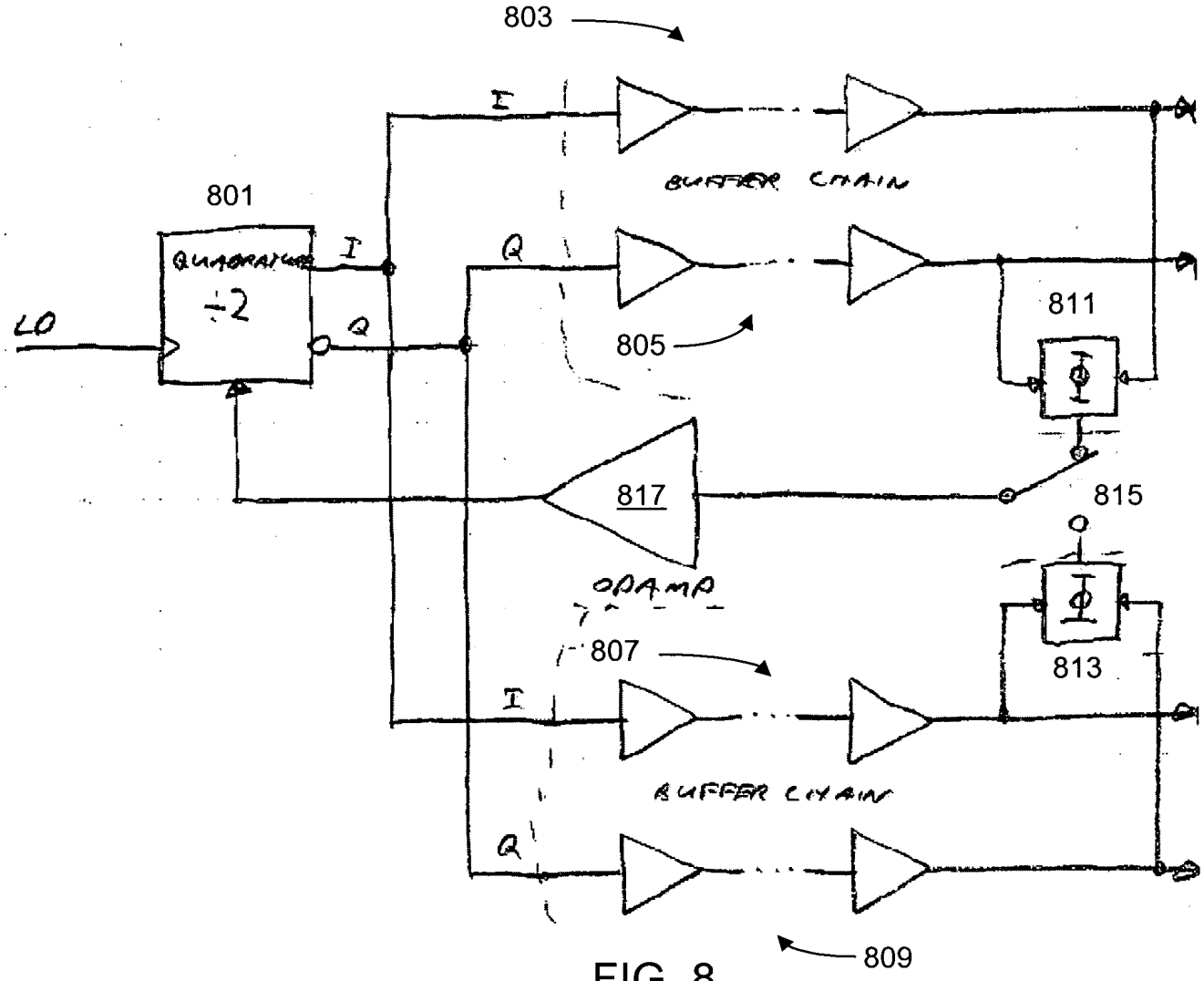
803
I
BUFFER CHAIN
801
QUADRATURE
÷2
I
Q
LO
Q
805
811
817
815
OPAMP
807
813
I
BUFFER CHAIN
Q
809

FIG. 8

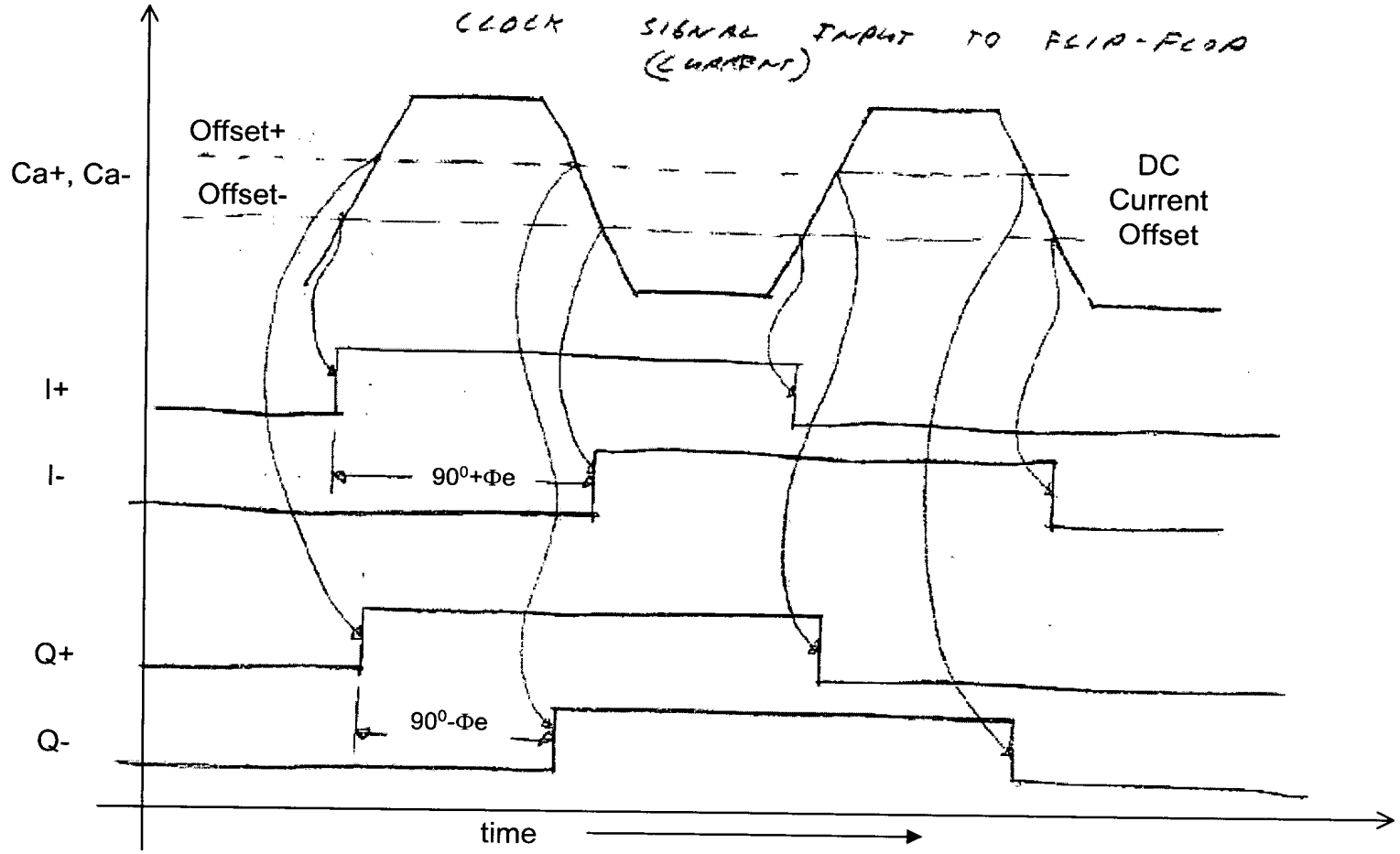
CLOCK SIGNAL INPUT TO FLIP-FLOP
(CURRENT)
Offset+
Offset-
Ca+, Ca-
DC
Current
Offset
I+
I-
90⁰+Φe
Q+
Q-
90⁰-Φe
time

FIG. 9